



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/604,661 | 08/07/2003 | Roberto Teran, Jr. | FGT 1832 PA | 1660 |
| 28549 | 7590 | 11/18/2005 | EXAMINER | |
| KEVIN G. MIERZWA ARTZ & ARTZ, P.C. 28333 TELEGRAPH ROAD, SUITE 250 SOUTHFIELD, MI 48034 | | | CAVALLARI, DANIEL J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2836 | |

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/604,661 | TERAN, JR. ET AL. | |
| | Examiner | Art Unit | |
| | Daniel J. Cavallari | 2836 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/7/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 8/7/2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11, 17, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "approximately" in claim 11, 17, and 19 are a relative term which renders the claim indefinite. The term "approximately" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 8, 9, & 13-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Boggs et al. (US 2002/0165660).

In regard to Claims 1-3, 8, & 13-16

- An ignition enabling device, read on by the “key-on” and “key-off” states (See Paragraph 37)
- An engine controller, read on by VSC (40) and ECU (46) having a plurality of functions and being coupled to the ignition-enabling device and temporarily maintaining operation of a portion of controller functions, including an electronic throttle control function and ignition system, when the ignition-enabling device is switched off (See Figure 1 & Paragraph 15, 24, & 35-38)
- Transmitting signals from an ECU to control the engine throttle position based on an electronic throttle control system (drive by wire) (See Paragraph 38 & 40)

Art Unit: 2836

In regard to Claim 4

- A system further comprising a switch, read on by the vapor management valve, coupled to the ignition-enabling device and a fuel supply system wherein the engine controller (40 & 46) disable the fuel supply system upon the ignition-enabling device, "key-off", switched to the OFF state (See Figure 4 & Paragraph 24 & 38)

In regard to Claim 9

- Temporarily preventing shutdown of a throttle plate (See Paragraph 24, 38, & 40)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-7, 15, & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boggs et al. and Page et al. (US 6,499,455).

In regard to Claims 5, 6, & 20

Boggs et al. teaches transmitting signals from the ECU to control the engine throttle position based on an electronic throttle control system (drive by wire) (See Paragraph 38 & 40) but fails to explicitly teach the use of a switch in which to control said throttle.

Page et al. teaches a drive by wire system utilizing a power switch, relay (58), in which to control the air control valve (42) (See Column 2, Lines 61-65). Page et al. further teaches the switch (58) being closed when the ignition switch is closed and temporarily preventing disablement of the switch when the ignition switch is turned off (See Column 3, Lines 12-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the throttle control taught by Page et al. into the vehicle shutdown system taught by Boggs et al. utilizing a relay and temporarily maintaining the relay in the closed position when the ignition switch is put in the off position. The motivation would have been to prevent exhaust gases from mitigating into the intake manifold (See Abstract).

In regard to Claim 7

Boggs et al. teaches generating a signal (DES_ENG_TORGUE) used to control a throttle position but fails to explicitly teach a throttle position sensor. Page et al. teaches a sensor, read on by circuit (78), that senses the transition of voltage which causes an actuator to adjust or maintain an air control valve at a predetermined open position (See Column 4, Lines 32-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the throttle actuator position sensor taught by Page et al. into the vehicle shutdown system of Boggs et al.. The motivation would have

Art Unit: 2836

been to provide a reliable and accurate control means for the throttle not explicitly taught by Boggs et al.

Claims 10, 11, & 17-19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boggs et al. and Page et al. and applicant's admitted prior art.

In regard to Claim 10

Incorporating all arguments above of the vehicle shutdown system taught by Boggs et al. and noting that Boggs et al. teaches adjusting a throttle-controlled device to a desired airflow but fails to explicitly teach the airflow being restricted.

The applicant's admitted prior art discloses "several current electronic throttle control systems have a default position of the throttle plate. The default position is typically approximately 7-8 degrees from a closed position" (See Paragraph 4)

Page et al. teaches a control circuit configures to generate a control signal to induce a valve actuator to open an air flow controlling valve for a predetermined amount of time after engine shutdown after which time, the valve closes, which is an air flow that is more air restrictive than in the ignition-enabling "ON" state with a default of 7-8 degree position.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the throttle-controlled device taught by Page et al. in which to completely close and restrict the air flow after a predetermined amount of time,

Art Unit: 2836

thereby restricting the air flow more when the ignition-enabling device is switched "OFF" than when the throttled controlled device is in a default position, 7-8 degrees as explained in applicant's admitted prior art. The motivation would have been to prevent further airflow into the intake manifold (See Column 4, Lines 44-50).

In regard to Claims 11 & 19

Incorporating all arguments above of the vehicle shutdown system taught by Boggs et al. including the air control valve taught by Page et al. in which the valve is operated at a predetermined open position (See Column 4, Lines 40-50).

Boggs et al. and Page et al. fail to expressly disclose adjusting a throttle-controlled device to be 1.5 degrees open relative to a closed position.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the valve to 1.5 degrees as the predetermined opened position of the valve since it has been held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)

The motivation would have been to provide an operating angle for the valve which allowed the correct amount of air for the intake manifold.

Art Unit: 2836

In regard to Claim 17

Incorporating all arguments above, Boggs et al. fails to teach enabling the throttle-controlled device to be in a default position when the engine speed is approximately zero.

Page et al. teaches enabling the throttle-controlled device to a desired open position when the engine is idle (approximately zero).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the throttle control during idle as taught by Page et al. into the vehicle shutdown system of Boggs et al. The motivation would have been to allow the vehicle engine to properly idle without completely turning off.

In regard to Claim 18

Incorporating all arguments above, Boggs et al. fails to teach explicitly teach disabling a controller as part of the shut-down method which includes enabling the throttle-controlled device to be in the default position.

Page et al. teaches shutting down a controller, read on by microprocessor (62), after a predetermined time has elapsed after engine shutdown (See Column 4, Lines 60-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the power disabling feature taught by Page et al. into the shutdown system of Page et al. in order disable the controllers (40 & 44) after

Art Unit: 2836

shutdown. The motivation would have been to conserve power by disconnecting power to the controllers.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boggs et al. and Bakholdin et al. (US 2002/0157881)

Incorporating all arguments above of the vehicle shutdown system taught by Boggs et al. including the various states of the system during shutdown (See Figures 2 & 4), Boggs et al. fails to teach a safety monitor which monitors the states of the system during shutdown.

Bakholdin et al. teaches a safety monitor as part of CPU (332) (See Paragraph 120) in which during shutdown of the engine, the states are monitored for a fault and the system continues to operate unless the fault exceeds a predetermined severity level.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the safety monitor taught by Bakholdin et al. in which to monitor the various shut-down states taught by Boggs et al. in which the operational status of the various devices were monitored, as taught by Bakholdin et al. and operation of the controller functions was maintained when the ignition-enabling switch is switched to the off position, as are the controllers (40 & 44) taught by Boggs et al.

The motivation would have been to protect the system and it's occupants by identifying dangerous conditions during shutdown.

Art Unit: 2836

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kamimura et al. (US 6,474,301) teaches a throttle valve operating at 1.5 degrees

Slopsema et al. (US 2002/0179031) teaches a method and apparatus for controlling a shutdown of an internal combustion engine that includes maintaining control of the throttle after an ignition switch is closed and controlling the throttle airflow.

Reichert, Jr. et al. (US 4,574,752) teaches an engine shutdown procedure that maintains control of the throttle after shutdown, the system comprising a relay, throttle control, fuel supply, and fuel shutoff valve.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Cavallari whose telephone number is (571)272-8541. The examiner can normally be reached on Monday-Friday 8:30-5:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2836

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DJC

November 2, 2005



BRIAN SIRCUS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800